becomes dilated; the capillary vessels are filled with blood; the heart's contractions are at first increased, later reduced in frequency, they are arrested during the tetanic paroxysms. The author attributes the principal effects of coffee to its action on the nervous system, not to its influence on the tissue-change. The nervous system being rendered more susceptible, the same exciting cause produces a greater effect. Coffee thus refreshes, Voit thinks, the fatigued body, renders the lassitude less perceptible, and in this manner enables us to endure prolonged exertion. The experiments on the influence of *bodily exercise* (treadwheel) on the tissue-change in the well-known dog lead to the unexpected result, that the excretion of urea was not at all, or only very slightly, increased by bodily labour. Voit infers, therefore, that muscular action does not cause increased decomposition of albuminous substances, while it is accompanied with a greater consumption of fat. As the decomposition of albumen is not the source of the production of force, connected with muscular contraction, Voit is inclined to look for it in the development of electricity.—*Brit. and For. Med. and Surg. Journ.*, July, 1862.

3. *Calorific and Vascular Nerves of the Sympathetic.*—M. CLAUDE BERNARD, in a paper, the first of a series to be presented to the Academy of Sciences, endeavours to demonstrate that the vascular and calorific nerves are special nerves to be topographically and physiologically distinguished from the ordinary motor nerves. Having opened the spinal canal in dogs, he divided as they left the cord all the origins of the sacro-lumbar plexus (sometimes on one side and sometimes on the other) which supplies sensation and motion to the hinder extremity. The limb became completely paralyzed, but no calorification or vascularization was observed, the temperature on this side often, indeed, diminishing. When only the posterior and anterior roots were divided, corresponding abolition of sensation or of motion occurred; but in neither case was there any vascularization or change of temperature in the limb. In a dog in which complete paralysis of the left hind leg was produced by division of the origins of the sacro-lumbar plexus, the sciatic nerve was afterwards divided. Its origin having been already divided, the subsequent section was not felt, and added nothing to the paralysis of motion and sensation that already existed; but vascular and calorific phenomena immediately followed, the temperature of the limb steadily rising until it was from 6° to 8° C. higher than that of the opposite one, and so continued until the death of the animal next day.

The experiment was repeated a great many times with exactly the same result. It is evident, therefore, that nerves influencing these functions must have become adjoined to the motor and sensitive nerves in the short interval between their issue from the canal and the point where the sciatic was divided. It is only the sympathetic, placed on the sides of the spinal column, which could thus become joined to these nerves; and M. Bernard in another experiment, destroyed the ganglion of the sympathetic and its filaments, which lay upon the side of the fifth and sixth lumbar vertebræ, leaving the nerves of the sacro-lumbar plexus entirely intact. An excess of temperature in the limb was immediately observed, and during the three days the animal lived, the paw of the side operated upon was from 5° to 8° hotter than the other—no paralysis whatever being present. The conclusion to be drawn is that there are three distinct descriptions of nervous influence—1. The sensitive, due to the posterior roots of the sacro-lumbar plexus; 2. The motor or muscular, belonging to the anterior roots: and 3. The vascular and calorific, due to the sympathetic.—*Med. Times and Gaz.*, Aug. 23, 1862, from *Gaz. des Hôp.*, No. 94.

MATERIA MEDICA AND PHARMACY.

4. *Is Alcohol Food?*—Dr. THOMAS INMAN, of Liverpool, read an interesting paper on this subject before the British Medical Association at its late meeting in London.

The author first devoted a few words to definition, stating that by "alcohol"

he intended to comprise those liquors in common use which owed their effects to alcohol; and by "food," anything which supplied material by which the body was nourished. He then adverted to the fact that a saccharine material was found in the blood of all mammals when it entered the lungs, and to the strong probability that a fermentative process took place in those organs, with the extrication of carbonic acid, the actual source of which in the blood had not yet been absolutely ascertained. The close atomic composition of starch and sugar and alcohol *plus* carbonic acid was pointed out; also the fact that the starches, &c., and alcohol were often tolerated by delicate stomachs when other ingredients were not tolerated.

The author then shortly summarized the effects of ordinary food, whether animal or vegetable, when taken with water for a beverage and in proper quantity, and compared these with the results following a temperate draught of ale or porter; showing that there was no real distinction between the one and the other, except that the liquid sooner entered the circulation and sooner left it. It was no argument against the use of beef that a man who had dined on it one day wanted a dinner the day after; nor against beer, that a person who had taken one glass was ready for another in a few hours. The prejudicial effects of excessive eating were adverted to, and after mentioning a few instances where guzzling had proved fatal, others were alluded to in which a prolonged lethargy or an apoplectic condition had been induced. The use of beef tea sometimes produced convulsions in infants, but this result did not vitiate the dietetic value of meat. The physical condition of excessive eaters was then spoken of, and it was shown that some were thin, others stout; and that as regarded the moral condition of those who, from choice, religious belief, or necessity, abstained from the use of alcoholic beverages, they were to the full as bad as those who indulged in drink. Cannibals were teetotallers, and neither Nana nor Tippoo was a drunkard. On inquiring into the habits of total abstainers and those who drank ale, wine, &c., the author had ascertained that the former habitually ate much more than the latter; and one of three deductions was necessary: either the former ate too much, the latter too little, or the drink of the one was equivalent to a portion of the food of the other. To ascertain which of these alternatives was nearest the truth Dr. Inman had experimented in his own person, and had made numerous observations through the assistance of friends. The conclusion he came to was that which had been previously insisted on by Mr. Lewes and others—namely, that alcohol replaced a certain amount of food; and "as things which are equal to the same are equal to one another," he inferred that if a glass of ale was equal to a slice of mutton in its satisfying effect, and that mutton was food, it must follow that ale is food. To say that persons could not live on ale, was of no value as an argument; for no one could live on biscuit alone, though bread was called the staff of life. To ascertain how far it was possible for any one to live on alcohol alone, he had for many years been seeking information respecting drunkards, and he mentioned two—one on the authority of the individual herself (a surgeon's widow), and the other on the authority of the medical attendant, where patients had subsisted for a prolonged period on brandy and water alone. He mentioned others on the authority of other medical friends, and two which he had himself been conversant with. He combated the idea of the probability of imposture, inasmuch as in all these cases solid food was loathed excessively, and was generally rejected by the stomach. He then mentioned some cases of children that he had attended, in whom the appetite had failed entirely, where food which was administered by force had been vomited, yet in these alcohol in one form or other gave the support which other food did not, and gradually restored the appetite to its normal state. He noticed, too, that infants at the breast, when ill, would digest brandy and water when they would reject all else. The advantageous influence of this fluid was apparent even if it were administered in enemata.

A definite course of induction, irrespective of chemical theory, having ended in the conclusion that alcoholic drinks were strictly alimentary, he shortly referred to the statements which were relied upon to demonstrate the contrary. If alcohol, he said, passed out of the system unchanged, so did water; yet water was absolutely necessary to life. But there was no proof that all the alcohol

imbibed in a long symposium ever left the body. He inferred that if it did pass out of the lungs in vapour as largely as was assumed, a party of spirit drinkers would make the atmosphere of a closed room explosive; and he recalled the statement of Pereira, that some northern race had found that two or three people in succession might keep up intoxication with "lolium temulentem" by drinking the urine of the first eater; yet none had discovered that the urinal of a drunkard contained anything equal to gin. But certain foods, as oatmeal, bran, potatoes, oats, &c., were not wholly retained in the system, yet they were alimentary.

Dr. Inman then combated the idea that alcohol was a mere stimulant, by contrasting it with turpentine, cantharides, ginger, cayenne, iodide of potassium, and other drugs, which were stimulants to every part of the body to which they were applied. He argued that alcohol could not simply be a conservator of tissue; for a glass of ale after a long walk would induce plentiful perspiration, and a glass of whisky or gin and water acted with most people as a powerful diuretic. Nor could we conclude that it assisted in disintegrating the tissues; for if it did, the use of ale, wine, or spirit must then be antagonistic or antidotal to food, and the winebibber must necessarily require more food than the teetotaller, whose tissues were not disintegrated by artificial means.

He then summed up his conclusions thus:—

1. Nature has provided in the salivary glands, the liver, and the lungs of every mammal an apparatus for converting all food, especially farinaceous, into alcohol; and we have no evidence that such conversion does not take place.

2. One form of alcohol or another is available for the support of life, and for restoration to health when no ordinary food can be or is digested.

3. Alcohol, after being taken, is incorporated with the blood, passes into the various tissues, and ultimately disappears, a small portion only passing away in the breath. We can say no more of bread, potatoes, or oatmeal porridge, a small portion of each of which passes out of the body with the feces.

4. Alcohol, in the form of ale, porter, wine, &c., relieves hunger and quenches thirst simultaneously, and with a completeness that is not equalled by water, infusion of gentian, cayenne pepper, or by turpentine—i. e., it does not act as water simply, or as a stimulant alone.

5. Wine, beer, &c., satisfy the appetite when taken alone, and act for the time like any solid food would do.

6. When alcohol is mingled with other food, a less amount of the latter suffices for the wants of the system than if water had been used as the drink.

7. The various forms in which alcohol is taken have as marked and specific effects as have animal and vegetable articles of diet.

8. Individuals have subsisted wholly upon one or other of the various forms of alcohol in common use for periods of great length; and as it is illogical to conclude that they must have lived on air, without food, or on flies like chameleons, the conclusion is irresistible.

What that conclusion is, it might be left for every thinking man to decide.—*Lancet*, August 16, 1862.

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5. *Rennet Wine.*—Dr. GEO. ELLIS states (*Dublin Med. Press*, July 16, 1862) that about two years since, having failed to obtain benefit from the preparation called pepsin, he had recourse to the direct preparation of a solution of gastric juice from the calf's stomach, and with the most satisfactory results. His mode of preparing is as follows: "Take the stomach, or rennet bag as it is called, of a calf fresh from the butcher; cut off about three inches of the upper or cardiac extremity, which portion, as it contains fewer glandular follicles, may be thrown away; slit up the stomach longitudinally; wipe it gently with a dry napkin, taking care to remove as little of the clean mucus as possible; then cut it into small pieces (the smaller the better), and put all into a common wine bottle; fill up the bottle with good sherry, and let it remain corked for three weeks. At the end of this time it is fit for use.

"*Dose.*—One teaspoonful in a wineglassful of water immediately after meals.

"*Test of quality.*—One teaspoonful will solidify, to the consistency of blancmange, in from one to two minutes, a cup of milk (about eight ounces) at the temperature of 100° Fahr.

"In this action on the casein of the milk, it may be said that the wine itself might have some effect. This, however, cannot be the case, as wine will not solidify milk, and it will only curdle it at a much higher temperature, and in larger proportion."

A single dose of this preparation, which Dr. E. calls rennet wine, given daily after dinner, will, he says, "be found quite sufficient to act speedily and effectively, without other treatment, in the common run of cases of functional disorder of the stomach. It is not, perhaps, easy to explain the operation of this small quantity when we consider the large supply of the gastric secretion required for the thorough digestion of an ordinary meal. The action is probably due to those indirect chemical changes called catalytic transformations, which some organic substances, by their mere presence and contact, induce in each other, and in other proximate principles. Thus the conversion of a small portion of food in the stomach into healthy albuminose by this small quantity of sound gastric juice may induce the same healthy action throughout the stomach contents during the entire process of stomach digestion. It is at least equally difficult to explain the action and rapid extension of ferments generally in their appropriate solutions. I have often been forcibly struck by the magical effect of this small dose in removing offensive odour from the breath of young persons —a distressing symptom sometimes aggravated rather than relieved by purgative medicine; and I may also mention that in one of these cases cod-liver oil was easily tolerated afterwards though never before."

6. *Preparation of Oxygenated Water, and its Therapeutical Use.*—Dr. Ozanam gives the name of oxygenated water to water which is distilled and afterwards charged with oxygen under the influence of high pressure. The experiments he has made have led him to establish three modes of operation by this new medicine. 1. It improves the condition of the blood in cases where that fluid is impaired or deficient, as in dyspnœa, asthma, slow asphyxia, cyanosis, diseases of the heart, hæmorrhoids, and hæmorrhoidal visceral congestion. 2. It possesses an oxidizing or metamorphic action in cases where the organic products are arrested in their development, as happens in glycosuria, gout, the uric and oxalic gravel, and perhaps in scrofula. 3. It exerts an exciting and regulating action on the brain and the thyroid gland, and hence its use in goitre and cretinism. If, in fact, snow-water taken as drink gradually produces these morbid conditions, it is because it is entirely deprived of vital air. On the other hand, oxygenated water, as well as the inhalation of gaseous oxygen, produces no results in hemicrania, and unfavourable ones in cases of inflammatory disease. Thus, in croup, the oxygen temporarily tranquillizes the dyspnœa, but it increases the fever. In the treatment of ulcerated cancer the oxygenated water revives pretty well the powers of the patient, and the wounds assume a more vivid and rosy colour, but they do not heal; and if the surfaces are bathed with rags steeped in oxygenated water, even when very slightly charged, the ulcer is soon observed to become gangrenous on the surface. Oxygenated water is perfectly limpid and pure, and the gas is disengaged in the form of very fine bubbles. Having little taste, it resembles in this respect water which is deprived of air; and, like the latter, it is a little heavy for the stomach.—*B. and F. Med.-Chir. Rev.*, July, 1862, from *Compte Rendu de l'Acad. des Sc.*, November, 1861.

7. *Medical Properties of the Wild Thyme* (*Thymus Serpillum*) *and its Use in Spasmodic Cough.*—M. Joset states, that by the simple administration of an infusion of wild thyme, slightly sweetened and mixed with gum, he has observed the improvement and even the cure, as if by enchantment, of cases of hooping-cough, taken indifferently at all the periods of the disease. The same was the case in stridulous sore throat, and in convulsive and catarrhal coughs. In the worst cases of hooping-cough the pathognomonic paroxysms, although they did not entirely disappear at the end of a few days, became so much modified in their character, that the disease resolved itself into a case of simple bronchitis, which was easily treated. These remarkable cures, so rapidly effected, and obtained only by the administration of wild thyme, have led M. Joset to look upon this plant as a sovereign remedy, and in some degree a specific one, in the affections

of the air-passages. The employment of this plant is not a novelty, for it was formerly recommended very extensively in the treatment of obstinate coughs, and it enters into the formation of some popular powders and syrups. M. Joset advises it to be given in the form of a concentrated infusion, slightly sweetened, to be taken in any quantity which the patient can drink, and until the desired effect is produced. The favourable result has generally ensued at the end of a very few days.—*B. and F. Med.-Chirurg. Review*, July, 1862, from *Revue de Thérap.*, February, 1862.

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8. *Chemistry and Properties of the Cytisus Laburnum.*—Dr. T. S. GRAY publishes (*Edinb. Med. Journ.*, May, 1862) an elaborate investigation on this subject. The following are his conclusions:—

"1. That the crude drug has no irritant properties, and that the sickness and vomiting which it produces when administered in large doses are due to some action on the nervous system.

"2. That these disagreeable symptoms may be, to a certain extent, avoided by administering it in small doses.

"3. That it is not, as is generally supposed, a purgative when administered in small doses.

"4. That in small doses it has useful therapeutic properties.

"5. That the activity of the drug is owing to the presence of three vegetable principles, and not of one, as stated by MM. Chevallier and Lassaigne.

"6. That the principles, when carefully separated, have valuable narcotic and stomachic properties.

"7. That they have not the tendency of the crude drug to produce sickness and vomiting, unless when given in very large doses.

"8. That these principles are yielded in such quantity by the laburnum tree that they might with advantage be introduced into the pharmacopœia.

"9. That the principles are yielded by all parts of the tree, but in largest quantity by the bark and seeds.

"10. That the administration of charcoal will be found useful in the treatment of poisoning by laburnum."

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9. *Iodide and Oxyiodide of Antimony and their Therapeutic Action.*—Dr. VAN DEN CORPUT has employed in his practice for more than a year the different compounds of iodine with antimony, and the oxyiodide in particular has yielded such remarkable results that he considers it to be one of the most active of the antimonial preparations. The iodide of antimony is obtained by carefully heating in a glass retort one equivalent of powdered metallic antimony with three of iodine. The mixture soon fuses in the form of a thick liquid of a deep brownish-red colour, which is the iodide of antimony; and on cooling it solidifies into a mass which has a metallic fracture, and furnishes a powder of a brick-red colour. If great heat is employed, the iodide is volatilized without decomposition, and is condensed in the form of shining translucent scales. The reaction takes place with the disengagement of heat, and may lead to an explosion if too large a quantity is operated upon at one time, and therefore it is better to add the metallic antimony gradually to the iodine. The iodide of antimony, when in contact with water, is decomposed in the same manner as the chloride, into soluble hydriodic acid and a pulverulent yellow precipitate formed of hydrate of oxide and iodide of antimony, analogous to the powder of Algaroth. Alcohol also decomposes it by removing iodine. The oxyiodide of antimony is the only chemical form in which the combination of iodine and antimony can be conveniently used for internal administration, since by the contact with the liquids of the digestive canal the iodide of antimony is decomposed, as it is in water, into insoluble oxyiodide of antimony and hydriodic acid. The oxyiodide of antimony may consequently be obtained by rubbing up iodide of antimony with water, and thus decomposing it into hydriodic acid and oxyiodide of antimony of a bright yellow colour; but it is better to prepare this compound by adding an acid solution of chloride of antimony to a solution of iodide of potassium. A precipitate is immediately formed of a beautiful lemon-yellow colour, which after a few minutes changes to an orange yellow. When the decomposition is complete,

the precipitate is collected on a filter, washed, and dried. It is decomposed by most of the acids; hydrochloric acid dissolves it, setting the iodine free; and caustic alkalies also change it by combining with the iodine. When exposed to heat, it is resolved into antimonious acid and iodide of antimony, which is volatilized.

The researches of Dr. Van den Corput have convinced him that the iodide of antimony is chiefly adapted for external application as a revulsive. The irritating properties of this salt resemble those of tartarized antimony; while the oxyiodide, corresponding in its composition to Kermes' mineral, produces internally an action analogous to that of the last-named preparation, although its special effects are much more powerful. The oxyiodide is, in fact, a drug of great efficacy, being at the same time an expectorant and a powerful alterative. When suspended in a mucilaginous vehicle, in the dose of from 5 to 25 centigrammes (a centigramme is .1543 of a grain), it frequently excites at first nausea and sometimes vomiting, at other times it causes frequent and copious stools. The effects may be easily moderated by the addition of opiates or some other narcotic agent which is capable of deadening the susceptibility of the stomach. Tolerance appears to be established more readily, as in the case of tartarized antimony, by doses raised from 20 to 50 or even 70 centigrammes in twenty-four hours. In general, when taken in such doses, the drug excites at first a great diaphoresis, soon followed by diminution and considerable depression of the pulse. The number of inspirations is diminished in frequency, and this effect is accompanied by extreme muscular weakness. The oxyiodide of antimony is particularly serviceable in inflammation of the parenchyma of the lungs, and especially in the second stage of pneumonia; also in the treatment of subacute bronchitis and of œdema of the lungs. Its alterative and diaphoretic properties are also manifest in the treatment of acute rheumatic affections, as well as in certain inflammatory diseases of the heart. As to the iodide of antimony, its employment must be limited to the outside of the body. When applied to the skin, in the form of plaster or ointment, it produces an energetic revulsion, by causing on the surface a pustular eruption similar to that produced by tartarized antimony. But it has this advantage over the latter, that, independently of its local derivative action, it operates besides on the organism in a general manner by giving up a part of its iodine, which is then either directly absorbed, or by being vaporized by the heat of the body, surrounds the patient with an iodized atmosphere.—*B. and F. Med. Chirurg. Rev.*, July, 1862.

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10. *Professor Polli on Sulphites.*—A new series of salts, the sulphites, bisulphites, and hyposulphites of potash, soda, lime, and magnesia, which have hitherto been known only by the chemist, bleacher, and photographer, has of late been admitted into our materia medica; and as they are not, like Dr. Churchill's hypophosphites, recommended as specifics against one special disease, but as useful remedies for a great variety of morbid conditions, acute as well as chronic, local as well as constitutional, they are likely to fulfil at least part of their promises, and deserve the more to be thoroughly tried, as they can be administered even in large doses without any danger to the system. Some of the hyposulphites have already been tried in France; but the sulphites are, as far as I am aware, quite new in medicine. Their active principle is, in all probability, sulphurous acid, and its *modus agendi* is explained by an alleged decomposition of the salt, the subsequent change of sulphurous acid into sulphuric acid at the expense of the blood or the tissues; and the final formation of sulphates, which can always be traced in the urine, about twelve hours or even sooner after the administration of the drug. Whether the action of these salts, or of the sulphurous acid they convey, be called antiseptic, or antifermentative, or disinfecting, is of no importance. They are, at all events, likely to have alterating effects, and the results of therapeutical experiments, as far as they are extant, have confirmed this *à priori* supposition. The following is the experience of Professor Polli concerning these new remedies:—

1. The sulphite of *soda* is soluble in water, and of an unpleasant taste; dose ʒj to ʒij per diem. A solution of one to ten grains may be used for lotions.

The bisulphate of soda is also soluble, but its taste is so bad that it should only be used externally, dissolved in ten parts of water.

The hyposulphite of soda is soluble, and of tolerable taste. Dose gr. x to ℈ij per diem.

2. The sulphite, bisulphite, and hyposulphite of *potash* are all soluble; but only the last-mentioned should be administered internally, in doses varying from gr. v to ℈j per diem.

3. The sulphite of *magnesia* is the most soluble of all sulphites, the richest in sulphurous acid, and the least unpleasant to the taste. ℈ss to ℈ij may be given per diem, in ten grain doses.

The bisulphite and hyposulphite would be equally suitable for internal use, but are better dispensed with, as they are, by air and moisture, rapidly changed into sulphite of magnesia.

4. The sulphite of *lime* requires 800 parts of water for solution, while the bisulphite and hyposulphite are easily soluble. These three salts have been given in doses of only gr. iij to gr. vj per diem. Signor Polli recommends them in the purulent stage of consumption, where they are, according to him, apt to check the absorption of purulent matter and to favour the cicatrization of vomicæ. This seems a kind of *ex cathedrâ* argument, but the remedy will probably prove as good as any other.

5. Lastly, the sulphite, bisulphite, and hyposulphite of *ammonia*, are all very deliquescent, and of a pungent taste. They are easily changed into sulphates, and can only be used externally.

All the sulphites which can be administered internally may be given either in powder, mixed with sugar, and flavoured according to taste, or in edulcorated solutions. The sulphite of magnesia and the three salts of lime are preferable for internal, the others for external use. The hyposulphites in general have been found to act most slowly, inasmuch as they must first pass into the state of sulphites. They are rapidly decomposed by vegetable acids, but not altered by acetic acid, whence Signor Polli concludes, that during their use all kinds of fruit should be avoided, while vinegar may be allowed.

Having first tried these salts in animals, and having found that dogs can take as much as two or three drachms a day without showing any symptoms of disturbed health, Professor Polli commenced a series of clinical experiments, which were imitated by a few other practitioners, in a great variety of cases which hardly admit of classification. Although Signor Polli endeavours to make out that in all these cases the efficacy of the salts is due to the antifermentative action of the sulphurous acid they convey to the system, it remains still to be shown whether so many different diseases can fairly be attributed to the old bugbear of fermentation. But, leaving apart this dogmatical side of the question, I shall simply enumerate the principal diseases in which the sulphites have hitherto been given with success.

1. *Eruptive fever*, smallpox, scarlatina, and measles, especially their malignant forms; erysipelas, zoster, acute pemphigus.

2. *Chronic eruptions* require the additional application of lotions or ointments, made of hyposulphite of soda. As an excellent prophylactic remedy against contagious diseases of the skin, Signor Polli recommends the hyposulphites, especially that of soda, of which he gives from forty to sixty grains daily. He lays great stress on the sluggishness with which these salts undergo their chemical changes within the intestinal canal; and his belief in their prophylactic powers seems to be chiefly founded on this fact. But as nothing short of statistics can save the reputation of a prophylactic, we must wait for further experience before the value of these new remedies can be considered as fully established.

3. *Ulcers.*—Professor Polli excludes scrofulous and syphilitic sores, but it appears that other practitioners have tried the sulphites even in such cases, and not without success. I cannot find a case of genuine primary chancre thus treated. But an old sore, which had resulted from the opening of a bubo, has most successfully been treated by Dr. Galligo with lotions of sulphite of magnesia (1 : 20), the same remedy being also prescribed for internal use.

4. *Gastric and rheumatic fevers.*—For the so-called febris pituitosa of children, Signor Polli knows no better remedy than the sulphite of magnesia.

5. Absorption of purulent matter after surgical operations, nosocomial fever, puerperal fever, inflammation of the lymphatic vessels and glands from cadaverous infection. In all these diseases the curative action of the sulphites has been very striking, and has been further elucidated by a series of experiments on animals, which have led to important results. It was found that after a previous administration of sulphites, either given internally or injected into the veins, animals resisted the action of purulent and even putrid matter subsequently introduced into their system. When the latter was injected first, and sulphates given internally or injected afterwards, the deleterious action of the poison could always be arrested, even when its first symptoms had already set in. The effects are probably modified according to the quantities of matter used. But if the facts just mentioned should be confirmed by further experience, these new remedies would have to be considered as most important additions to the therapeutical stock, especially of veterinary surgeons.

6. Acute rheumatism, miliary and typhoid fever, have also been treated with sulphites; but Signor Polli speaks less confidently of these cases.

7. I have already mentioned that the sulphite of lime is recommended in pulmonary consumption, on account of its supposed tendency to produce cicatrization of vomicæ.

If, lastly, Professor Polli invites his medical brethren to try his sulphites also in cholera and intermittent fever, he evidently weakens his cause, although we may excuse excess of paternal partiality for a new-born remedy which bids fair to have a long and brilliant career, and which certainly deserves as much consideration as the podophylline and other children of fashion.

All sulphites used for therapeutical purposes should be prepared by the pharmacist, as those hitherto met with in commerce are far from pure. Signor Polli found that a compound sold to him as sulphite of potash contained sulphate of potash, clay, and some other insoluble matter; while a thing sold as sulphite of lime contained quicklime, carbonate and sulphate of lime, chloride and sulphuret of calcium, and some resinous matter. In order to avoid the possibility of mistakes, I will add that the sulphites here spoken of are represented by the formula $MO + SO_2$, the bisulphites by $MO + 2\,SO_2$, and the hyposulphites by $MO + S_2O_2$, without any reference to the additional multiples of water.—*Med. Times and Gazette*, June 14, 1862.

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11. *Glycerole of Tar* (Tar Plasma).—A combination of glycerine and tar has been used recently in skin affections instead of the tar ointment of the Pharmacopœia. The advantages seem to be that the glycerine compound is more readily absorbed, and less difficult to remove by washing. Mr. Brady states that he has not been able to find a formula for the preparation in question, neither can he learn that any published one exists, and would, therefore, propose the following, as yielding an unexceptionable product. The strength is the same as that of the unguentum picis liquidum, P. L.: Price's glycerine, six oz. weight; tar, six oz. weight; powdered starch, two drachms. Warm the glycerine, stir in the starch, add the tar, and raise the mixture rapidly to the boiling point. Strain through a cloth, if necessary, and stir while cooling. The mere mixture of glycerine and tar heated in a water-bath, gives on cooling a spongy mass, the pores of which are filled with glycerine; after standing some time, complete separation takes place. Tragacanth, acacia, soft soap, and many other things have been tried as substitutes for the starch, but none of them with so good result. Made according to the above formula, glycerole of tar is a dark brown mass, perfectly smooth, in consistence somewhat softer than the ointment.—*Dub. Med. Press*, Sept. 10, 1862, from *Pharm. Journ.*